CLAIMS

1. Method for kneading dough containing soft wheat flour characterized by the fact that the kneading operation is performed in the presence of ozone and by means of at least one mechanical agitator (“fraser”).

2. Method according to claim 1, wherein the ozone is supplied in dissolved form in the wetting water added to the flour.

3. Method according to claim 2, wherein the wetting water containing ozone is prepared from a vector gas containing ozone.

4. Method according to claim 3, wherein the vector gas is air, oxygen or a mixture of these two gases.

5. Method according to any of claims 2 to 4, wherein the ozonated or hyper-ozonated wetting water is prepared using dissolution reactors of the bubbling type equipped with a porous device, operating with or without a pressurized gaseous headspace, using pressure dissolution devices of single or multi-stage hydro-ejector types, or using pressure boosters or compressors of the dry type or liquid ring type.

6. Method according to any of claims 2 to 5, wherein the pressure of the wetting water lies between at least 0.5 absolute bars and no more than 2.2 absolute bars, preferably between at least 1.7 absolute bars and no more than 1.9 absolute bars.

7. Method according to claim 1, wherein ozone is added to the gaseous headspace of the kneading machine.

8. Method according to claim 7, wherein the gaseous headspace containing ozone in the kneading machine is prepared from a vector gas containing ozone.

9. Method according to claim 8, wherein the vector gas is air, oxygen or a mixture of these two gases.

10. Method according to any of claims 1 to 9, wherein the pressure prevailing in the gaseous phase of the kneading machine lies between at least 1.1 absolute bars and no more than 1.6 absolute bars, and preferably between at least 1.3 absolute bars and no more than 1.5 absolute bars.

11. Method according to any of claims 1 to 10, where ozone is supplied in dissolved form in the wetting water added to the flour and in the gaseous headspace of the kneading machine.

12. Method according to any of claims 1 to 11, wherein ozone is added selectively, sequentially, continuously or through the use of successive sequences of ozone supplied by liquid route and ozone supplied by gaseous route.

13. Method according to any of claims 1 to 12, wherein the ratio between the quantity of ozone added to the dough expressed in grams of ozone per hour divided by the quantity of dough produced expressed in kilograms of dough per hour, lies between 0.004 and 0.06.

14. Method according to claim 13, wherein the type of kneading used is conventional, intensive or hyper-intensive.

15. Method according to any of claims 1 to 14, wherein the kneading time is at least 2 minutes.

16. Kneading machine enabling kneading in the presence of ozone comprising a kneading bowl (2) or kneader body (25), frasers (3 or 26) and a driving device (6 or 24), characterized in that it also comprises a gaseous ozone inlet (8 or 30) and/or an inlet for ozonated or hyper-ozonated water (9 or 31).

17. Kneading machine according to claim 16, also characterized in that it comprises a kneading bowl (2) closed by a sealing lid (5), said lid (5) containing a compressible seal (11) allowing the sealed passing of the agitator (3), the kneading machine being adapted for so-called “conventional” kneading with mixing speeds of between 40 and 200 rpm, preferably between 40 and 80 rpm.

18. Kneading machine according to claim 16, characterized in that it comprises a water reservoir (21), a salt reservoir (29), a flour reservoir (22), a yeast reservoir (23), devices for conveying the dough forwards (27) and a dough outlet (28), the kneading machine being adapted for continuous kneading with mixing speeds of between 100 and 600 rpm.